5489

Form 504
Rev. Dec. 1933

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

~~Topographic~~
Hydrographic } *Sheet No.* 26 5489

State Texas

LOCALITY

Galveston Island

West Bay (Western Part)

193 3-4

CHIEF OF PARTY

Earl O. Heaton

U.S. GOVERNMENT PRINTING OFFICE: 1934

5489

Hydrographic Sheet number 26 and its accompanying records have been inspected and approved.

Earl O. Heaton

Earl O. Heaton,
Chief of Party, C.& G.S.

Form 537
Ed. Dec., 1930

REG. NO. 5489

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 26 5489

REGISTER NO.

State Texas

General locality Galveston Island

Locality West Bay (Western Part) Large

Scale 1 : 20,000 Date of survey Oct., Nov., 1933 Feb., March, 1934

~~xxxxxx~~ Project: HT-118

Chief of Party Earl O. Heaton

Surveyed by W. C. Russell, Ensign and J. L. Hale, Observer

Protracted by W. T. White, Observer

Soundings penciled by W. T. White

Soundings in ~~fathoms~~ feet

Plane of reference ~~M.L.L.W.~~ MLW

Subdivision of wire dragged areas by

Inked by W.L. Mullen

Verified by W.L.M.

Instructions dated Nov. 5, 19 32

Remarks:

U. S. GOVERNMENT PRINTING OFFICE, 1931

Landmarks attached - Hern

DESCRIPTIVE REPORT TO ACCOMPANY
HYDRO. SHEET #26
CHOCOLATE BAY, WEST BAY, AND GULF OF MEXICO

Date of Instructions:

The instructions for this work were dated November 5, 1932. (Project HT-118)

Survey Methods:

The greater part of the work on this sheet was done with a launch, the depth measurements being obtained with either a lead-line or a sounding pole graduated in feet. All sounding poles had a light metal plate about 6 inches in diameter on their lower end to prevent them sinking into soft mud and the leads used were moulded about 7 inches in diameter for the same purpose. The sounding pole was used for depth measurements up to about 12 feet and the lead-line was used for all other depth measurements. A skiff, powered by an outboard motor, was used for all inshore work, for the Chocolate Bay work, and for the development of a shoal area in the vicinity of Lat. 29° 11.5', Long. 95° 01.5'.

Discrepancies:

The following discrepancies were found and adjustments as noted were made:

The positions and soundings taken on "B day" (red) were rejected. This line was a cross line and it was deemed inadvisable to use the soundings as a check, because they were taken when the sea was rough with heavy chops and they could not be expected to be as accurate as soundings on the other lines. At a later date another cross line was run in this vicinity and very good results were obtained.

The diagonal cross lines run in the Gulf of Mexico on part of "H day" (green) and on "M day" (green) were rejected. These lines in comparison with the lines parallel to the shore were all too deep for some unexplainable reason; so in order to disprove the diagonal lines a series of cross lines were run normal to the shore. These normal lines checked the parallel lines very well in all cases except the outer line on "H day". This outer line as well as the diagonal lines appears to be too deep. The outer line on "H day" was also deeper than the sounding on sheet 14 at the junction. In drawing the 30 ft. depth curve this outer line was disregarded for about 2 miles at its west end, and the curve was drawn starting from the 30 ft. point on sheet 14 and drawing it through the 30 ft. depths on the lines normal to the shore line.

accepted. Hern. Tide reducers of cross lines (H day, green) changed in office. Average agreement is now within 3% or less - Hern.

Topographic signal BARN was inaccurately plotted on the boat sheet. This resulted in several discrepancies between the boat sheet and the smooth sheet. The smooth sheet has the correct location of topographic signal BARN and is not affected by the inaccurate location on the boat sheet.

In reviewing the smooth sheet protracting it was found that topographic signal SEC was undoubtly poorly located by the topographic party. At four or five positions where this inaccuracy caused an appreciable error, an adjustment has been made by plotting on time, course, and right angle, or sum of right and left angles, or left angle depending on whether SEC was left, center, or right object. SEC was used only for the Gulf work and in cases where it caused only a slight displacement of the position along a line parallel to the Gulf shore, no adjustment has been

made. Since a slight displacement of a position parallel to the Gulf shore will not affect the position of depth curves, it is not recommended that unadjusted errors due to the use of signal SEC, be adjusted. Accepted Kumm.
Positioning OSEC on lighter is the same as on tops. No change of pos. made.

Dangers:

A twenty-five foot wrecked launch is situated in Chocolate Bay at Lat. 29° 11.5', Long. 95° 09.4'. The wreck is bare 4 ft. at MLLW and lies in 2 feet of water. The wreck was noted in the sounding records at position 85 c (red). Appropriate note shown on sheet. Kumm

Two small reefs are bare at MLLW in the vicinity of Lat. 29° 10', Long. 95° 07.6', and sand bars extending in a northeasterly direction toward Alligator Point are also bare at MLLW. Boats of shallow draft that can navigate in this vicinity should keep west of this point, using the beacons along the Chocolate Bay channel as guides.
A number of bars and reefs are shown on the smooth sheet in this vicinity - Kumm.

Channels:

A channel formerly maintained by U. S. Engineers extends through West Bay forming a link in the present inland waterway system. Very soon this system is to be abandoned and replaced by the Louisiana-Texas Intra-Coastal Waterway. This channel is marked at frequent intervals by day beacons, some of which are in a bad state of repair and remain only as single piles. Within the limits of this sheet the channel carries 5½ feet of water at MLLW as a controlling depth. The channel entrance to the Mud Island cut is situated on sheet 14 and reference is made to the descriptive report for sheet 14 for information regarding this entrance.

A dredged channel extends through Chocolate Bay. The channel has shoaled to such an extent that at present the controlling depth is 2½ feet at MLLW. The channel entrance is marked by day beacons, which are described on the ~~smooth sheet~~ T-4852 (1922). A number of 4" piles mark the channel through the bay. The smooth sheet shows only the piles which were used for control; however, topographic sheet M shows the location of all of the piles. All piles were not shown on the smooth sheet since this information would obscure the soundings taken in the channel. All beacons and piles are on the north side of the channel except the pile used as topographic signal SIDE which is on the south side of the channel. Special attention is called to the fact that the channel passes just south of beacon BOB and not between BOB and PETE. A beacon at the turn of the channel near hydrographic signal HUDIE has been destroyed and this turn is no longer marked. It is recommended that the beacons whose topographic name is given below be charted:

FRONT, REAR, BOB, PETE, NEW, SIDE, END, DUAL, and BIG.

The others could be covered by an appropriate note on the chart.

A short privately dredged channel extends up a bayou at Lat. 29° 10.0', Long. 95° 01.6'. This channel carries two feet of water, but its entrance has shoaled until the controlling depth is only one foot at MLLW. The channel is marked with a number of posts bare four feet at MLLW. The posts have a 2" x 6" cross-piece painted white.

Comparison with Previous Surveys:

In comparing this sheet with U.S.C.& G.S. chart 1282 it was found that there were no important discrepancies. In general it might be said that this survey has established the fact that there is much more water of a seven foot depth just northwest of Galveston Island than is shown on U.S.C.& G.S. chart 1282.

Beacon 43 has been destroyed. A single pile was located about 400 meters southeast of the position of beacon 43 as shown on U.S.C.& G.S. chart 1282. This pile is about 450 meters off the line of the channel through West Bay and is probably intended to mark the deep water leading from West Bay toward San Luis Pass.

Geographic Names:

No new names were used on the sheet. H.B.

Statistics:

Number of Positions	2,293
Number of Soundings	16,026
Statute Miles of Sounding Lines	557.4

Men in Charge of Hydrography:

J. L. Hale, Observer, was in charge of the greater part of the hydrography on this sheet. W. C. Russell, Aid, was in charge of a small part of the hydrography in Chocolate Bay and a small part of the skiff hydrography in West Bay.

Inspected and approved by,

Earl O. Heaton

Earl O. Heaton,
Chief of Party, C.& G.S.

Respectfully submitted,

W. T. White

W. T. White,
Observer.

1 C KC

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5489

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	2293
Number of positions checked	146
Number of positions revised	4
Number of soundings recorded	16,026
Number of soundings revised	?
Number of signals erroneously plotted or transferred	None

Date: December 26, 1934

Cartographer: W. L. Mullen

Verification of protracting) by W. L. M.
Verification & inking of rocks and shoals) by W. L. M.

Verification of inking by W. L. M.

Review by H. W. Murray

Time: 19 1/4
Time:
Time: 13 1/2

See Verifier's remark (back of page 1) which explains excessive time of verification

C K G

Verifier's Report to accompany H-5489 1/8/35

The protracting and pricking on this sheet was checked both visually and by actual protracting and was found to be excellent. In cases where the records state that positions might be slightly displaced a check has been made. The check on these positions has not revealed the necessity of making any change as the extreme regularity of the bottom would make any changes in the soundings impossible. Due to change of Plane of Ref. from MLLW to MLW. Hkms.

There are many places on the records where the tide reducers have been changed thus altering the pricked soundings. The writer has made no attempt to keep track of the number of these changes as the time consumed in doing so would be too great to warrant the finding of the result. Approx. Lat. 29°07', Long. 95°03' Combines now in good agreement Hkms

At Positions 1N to 15N (Green) a very apparent discrepancy seemed to exist between the lines run parallel to the shore and the lines run normal to the shore. Inasmuch as a change of a few tenths of a foot would tend to improve the condition, this matter was taken up by the writer with Mr. Cole of the tides section who changed the reducers, thus improving the condition but not entirely eliminating it. This change by Mr. Cole is noted in Vol 6, pages 35 to 38 of the records. a minor change in L.W. Line Hkms

Attention of the reviewer is called to Pos. 49 E.F. (Green) Lat 29-06.8 Lng 95-06.2. The low water line as shown by Topographic Party (T-4852) is in disagreement with soundings as taken by Hydrographic Party. The soundings as taken by Hydrographic Party has been inked and the low water line drawn with reference to the soundings rather than to the Topo. sheet. In all other respects the topographic sheet agrees very well with

with the shore line as drawn by the Field Party
When the inking of the soundings on this sheet
was practically complete an order was issued re-
garding the inclusion of ½ foot soundings where
large areas were affected, Capt. Ellis to tentatively
lay off these areas. When this sheet was submitted
to Capt. Ellis for preliminary approval of the pencil
curves, these areas were laid out. This necessitated
going through the records a second time to bring
the sheet to completion according to this order
which accounts in part for the excessive time
that seems to have been used in the completion
of the sheet.

The notes in the Remarks columns in the records
are in some instances somewhat vague and re-
quired some time to interpret. This information given in Sdg. Rec. Extra pages not mailed - destroyed. H.W.M.

The descriptions of various beacons etc. as pen-
cilled on smooth sheet have not been inked but
have been copied and checked and are incorporated
in the Descriptive Report in a seperate sheet. There
was no description relative the the Coast Guard Boat
Horse (Vol 7. Page 3) Object too small to merit description. Appropriate note placed on sheet - H.W.M.

Some soundings preceding 14C (red) Lat. 29-09.6 Long
95-07.8 have been inked in smooth sheet as shown and pencilled
It would appear that recorder dropped the volume
in water and had missed a fix which necessitated
taking a late one at 14C and plotting soundings
back on time and course.

Position 32 C (red) Vol 9 page 62 - Lat. 29-09.3 Long
95-08.1 — See note in volume above referred to.
The position is O.K. as plotted but there is no
further authority for placing it here than the

Appropriate note relative to currents having shown on sheet. H.W.M.

Boat sheet, which merely shows a pencil line to indicate in a general direction where the line is. The difference in soundings in this area is negligable so further no stress should be laid on this point. Plotted as recorded (fm) Hymm OK

Position 63 d (red) Records mention line turning right at end of small pier. Pier is not shown on either Hydro. or Topo. Sheet. Note floodgate marked about. Approx. Lat. 27° 12', Long. 95° 05' Hymm.

Notes in Vol. 8 - pages 3, 4 and 5 were taken for purpose of comparison only with work of the Launch "Gladys" as have not been plotted.

Notes in records, 1 day (Green) as to distance to 0.0 soundings have been disregarded. Either Hydro party mis-estimated these distances or Topo. Party did not. Depths 1½ feet as shoal for Hydro. using plus tide values of 0.4 feet. Hymm

GIWW Low Water line

There seems to be some doubt as to the location of Beacon 41 - Lat 29-11.8 - Long 95-01.7 (See note Vol. 6 - page 54) This beacon is also located on 1 day (Green) with a different tidal factor. Neither of these cuts for this beacon plot very well. 3-Point fix locations applied. Plots on range - not shown on T-6852 Hymm.

To reviewer - See Inset - Chocolate Bayou - from B.S. Hymm. Inked on smooth sheet.

The writer finds no authority in the records for the Mud flat shown in Chocolate Bayou. However it must have existed in order that the Hydro. Party find it. The note that it bares 1 mark at M.L.L.W has not been noted pending a decision by the reviewer. The writer consulted Mr. Cole of the Tides Section in an effort to determine just what the difference between M.L.L.W and M.L.W was, and was informed that it was so slight as to be

for all practical purposes, undeterminate. It is suggested that the words Mud Flat be inked and that the note in regard to its elevation be omitted. This suggestion has met with the approval of Lt. Green. This also applies to the four shell banks in the vicinity of signals Walt and Twig. Also include shell bank near signal Pete on B.S.

Respectfully submitted

W. L. Mullen

Hydrographic Sheet #26 5489

Form 567
Rev. Jan., 1933

DIVISION OF CHARTS, FILE NO.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Corpus Christi, Texas

July 18, 1934

DIRECTOR, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted.

Earl O. Heaton

Earl O. Heaton
Chief of Party.

	DESCRIPTION	POSITION				DATUM	METHOD OF DETERMINATION	CHARTS AFFECTED
		LATITUDE		LONGITUDE				
		° ′	D. M. METERS	° ′	D. P. METERS			
1,2,3)	San Luis Coast Guard Station, finial	29 06	1501.4	95 04	1545.6	1927	Triangulation	1282, 1117
(1)	Titlum-Tatlum Is., Hunting Lodge Chimney,	29 04	857.1	95 08	1313.8	1927	"	1282

A list of objects carefully selected because of their value as landmarks as determined from seaward together with individual descriptions, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report.

The selection, determination, and description of these points are an important factor in the value of the chart. Landmarks selected at appropriate intervals can be clearly charted. However, when none is outstanding, a group of two or three objects may by their interrelationship provide positive indentification. A group so selected should be indicated.

The description of each object should be short, but such as will clearly identify it; for example, a standpipe, elevated tank, gas tank, church spire, tall stack, red chimney, radio mast, etc. Assign numerals to landmarks to indicate: (1) offshore, (2) inshore, (3) harbor, 1, 2, 3 would be a mark useful on all charts. Generally, flagstaffs and like objects are not sufficiently permanent to chart.

U. S. GOVERNMENT PRINTING OFFICE: 1933

Hydrographic Sheet #26. 5489

Form 567
Rev. Jan., 1933

DIVISION OF CHARTS, FILE NO._____

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Corpus Christi, Texas

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(1) Titlum-Tatlum Is., Hunting Lodge Chimney.	29 04	857.1	95 08	1313.8	1927	"	1282

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U. S. GOVERNMENT PRINTING OFFICE: 1934

To: Mr. Bacon
From L. S. S.

Survey No. H 5489

GEOGRAPHIC NAMES

TEXAS

Date. Oct. 19, 1934

Chart No. 1282-?

Diagram No. 1282-2

Names underlined in red approved Oct 22, 1934
H. Bacon

*, Approved by the Division of Geographic Names, Department of Interior.

¢, Not Approved by the Division of Geographic Names, Department of Interior.

R, Referred to the Division of Geographic Names, Department of Interior.

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	---------	Karankawa Reef	----	----	29° 12' 8 95° 00' 2
	West Bay	To be omitted after overlap is made			
	Galveston Island		C.S.S.		
	Gulf of Mexico				
	Alligator Point				
	Nymph Point				
	Chocolate Bay				
	Chocolate Bayou				
	Halls Lake				
	Mustang Bayou				

LLC

October 29, 1934.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
10 volumes of sounding records for

HYDROGRAPHIC SHEET 5489

Locality West Bay (Western Part) Galveston Bay, Texas

Chief of Party: E. O. Heaton in 1933 - 34
Plane of reference is mean low water, reading
2.6 ft. on tide staff at Karankawa
2.0 ft. below B.M. 1
2.2 ft. on tide staff at San Luis Pass
6.4 ft. below B.M. 1
3.2 ft. on tide staff at Chocolate Bay
-- No bench marks established
1.7 ft. on tide staff at South Jetty Lt.
3.1 ft. below B. M. 1

Height of mean high water above plane of reference is 1.4 ft. at South Jetty Light; 1.0 ft. at San Luis Pass; 0.7 foot at Karankawa and Chocolate Bay.

Condition of records satisfactory except as noted below:

H A Marmer

Acting Chief, Division of Tides and Currents.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5489(1933-34)

Galveston Island, West Bay(Western Part) Texas
Surveyed 1933 and 1934
Instructions dated November 5, 1932(E. O. Heaton)

Hand Lead and Pole Soundings - 3 Point Control on Shore Signals.

Chief of Party - Earl O. Heaton.
Surveyed by - W. C. Russell, J. L. Hale.
Protracted and soundings penciled by - W. T. White.
Verified and inked by - W. L. Mullen.

1. Condition of Records.

The records are neat, legible and conform to the requirements of the Hydrographic Manual.

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey satisfy the instructions for the project. A small rather unimportant holiday of approximately 1/4 square mile exists in lat. 29°10.2', long. 95°06.0'. Depths affected vary from 1 to 5 feet. (See Additional Work, par. 9).

3. Sounding Line Crossings.

Such crosslines as were run or result from the work are excellent.

4. Depth Curves.

The usual depth curves may be satisfactorily drawn including portions of the zero curve.

5. Junctions with Contemporary Surveys.

a. The junctions with H-5522(1933-34) on the northeast, H-5488(1933-34) on the south and H-5521(1934) on the southwest are excellent.

b. On the southeast, there are no contemporary surveys offshoreward of Galveston Island.

6. Comparison with Prior Surveys.

a. H-472(1855), H-931(1867) and H-932(1867).

Soundings of H-472(1855) in the area southeastward of Galveston Island gradually vary from 1 to 5 feet shoaler (as depths increase offshoreward) than those of the present survey whereas soundings of the other two surveys in West Bay vary 1 to 2 feet shoaler. However, a few spots are unchanged in depths.

7. Comparison with Chart No. 1282.

a. Hydrography.

1. Soundings shown on the above chart originate with surveys discussed in the preceding paragraph with the exception of a few soundings from a U. S. Engineers' Survey of 1922(B.P.No. 18243) in the southern part of West Bay which vary about 1 foot shoaler than those of the present survey, and surveys of 1907(B.P. No. 10983) and 1899(B.P. No. 12395) in Chocolate Bayou and Chocolate Bay (uncharted) soundings of which agree within 1 foot with those of the present survey. Within the area covered, H-5489(1933-34) supersedes previous chartings from the above blueprints.

2. The source of the 1 foot sounding and the note "reef" (Lat. 29°10.1', Long. 95°07.2') accompanied by a sunken rock symbol is not known. However, the 1 foot sounding falls in depths of about 3 feet and the reef falls about 140m. due west of two reefs on the present survey. The sounding and reef are believed to be a generalized representation of what is more accurately shown on the present survey and should accordingly be superseded.

b. Fixed Aids to Navigation.

All charted beacons shown in the vicinity of approx. lat. 29°12', long. 95°01' have been located on the present survey of which Bn. No. 4 is practically unchanged in position whereas Bns. Nos. 35, 37, 39 and 41 as well as the axis of the dredged channel shown here have been located on the present survey in positions varying from 200 to 400m. in a northerly direction from their charted positions. The authority for the charted positions is not known but the channel was first charted on Chart No. 204 (Ed. of 1907) and the beacons were added in the year 1917. In connection with Bn. No. 35, a note in the sounding records of H-5522(1933-34), Position 42d, blue which was added by the field plotter states that this is an"old beacon which had been broken off just above water" which implies that the beacon has been partially destroyed and is now an obstruction to navigation. The essence of the above note is further substantiated by appropriate remarks in the descriptive report (page 2) of that survey.

8. Field Plotting.

Field protracting and plotting were accurate and conform to the requirements of the Hydrographic Manual.

9. Additional Field Work Recommended.

No additional work is necessary. However, in view of the fact that additional work is recommended in the review of H-5488 (1933-34) on the south, it would be advisable to survey the holiday discussed in paragraph 2 of this review in lat. 29°10.2', long. 95°06.0' and at the same time ascertain by inspection or field work, the prevailing depth in Halls Lake about 3/4 mile due north.

10. Superseding Previous Surveys.

Within the area covered, H-5489(1933-34) supersedes the following surveys for charting purposes:

H-472(1855)	In part.
H-931(1867)	" "
H-932(1867)	" "

11. Note to Compiler.

Attention is directed to recommendations regarding charting of aids to navigation in the vicinity of Chocolate Bay contained in page 2 of the D. R.

12. Reviewed by - Harold W. Murray - February 9, 1935.

Inspected by - A. L. Shalowitz.

Examined and approved:

C. K. Green
Chas. K. Green,
Asst. Chief, Div. of Charts.

L. O. Colbert
Chief, Div. of Charts.

F. S. Borden
Chief, Section of Field Work.

G. Rude
Chief, Division of H & T.